Appendix J
Monitoring Needs to Support Conservation Actions

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
Statewide Actions				
a. The state should develop policies and incentives to facilitate better integration of wildlife conservation considerations into local and regional planning and land-use decision-making.	Has state adopted regional goals for species and habitat protection? Has DFG staff and resources devoted to asssting local governments to do conservation planning increased? How many local governments have adopted and implemented policies to achieved regional goals?	Monitor county and regional plans for conservation elements. Need long term regional monitoring.	Management Regional	DFG, FWS, Counties, Cities
b. Permitting agencies, county planners, and land management agencies should work to ensure that infrastructure development projects are designed and sited to avoid harmful effects on sensitive species and habitats.	How many local agencies have adopted policies to ensure that infrastructure development projects avoid effects on sensitive species and habitats?	Monitor infrastructure project plans for elements to avoid sensitive species and habitats.	Management Regional	DFG, FWS, Counties, Cities
c. The state should develop policies and incentives to better integrate wildlife conservation into state and regional transportation planning. Wildlife considerations need to be incorporated early in the transportation planning process.	What new policies and incentives have caused wildlife conservation to be considered early in the planning process for state and regional transportation projects? What transportation retrofits have been completed that reduce impacts on wildlife resources?	Monitor state and regional transportation plans for wildlife conservation elements.	Regional	DFG, FWS, Counties, Cities

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
d. State and federal agencies should work with cities and counties to secure sensitive habitats and key habitat linkages.	Habitat linkages have been identified for what percentage of the state's landscape? What percentage of identified habitat area of linkages is protected from development?	Identify senstive habitats and habitat corridors statewide and monitor local government actions to secure them.	Natural Community, Habitat Linkages	DFG, FWS
e. State and local agencies should allocate sufficient water for ecosystem uses and wildlife needs when planning for and meeting regional water supply needs.	What regions have developed a water budget that identifies the needs of wildlife and ecosystems? What number of regional integrated water plans have long term provisions to adequately ensure water for wildlife and ecosystems? In how many river systems have management changes been made so that flows more closely mimic natural flows? What new long-term contracts for instream flows and wetlands have been secured? What additional water rights have been secured for conservation? What actions have been taken to improve compliance with exisitng water rights?	Monitor state water management decisions and regional integrated water plans for elements to ensure sufficient water for ecosystem uses and wildlife needs.	Natural Community (Riparian, Aquatic)	DFG, FWS. SWRCB, DWR
f. Federal, state, and local agencies should provide greater resources and coordinate efforts to control existing occurrences of invasive species and to prevent new introductions.	What new actions have been implemented to prevent, eradicate or control invasive species? What are the priority invasive species problems in the state and what are the goals for prevention, eradication, or control of those species?	Monitor the status and trends of the prioritized invasive species.	Species	DFG, FWS, RCDs, CDFA, BLM, USFS, NPS, DPR, CCC

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
g. Federal, state, and local agencies and nongovernmental conservation organizations, working with private landowners and public land managers, should expand efforts to restore and conserve riparian communities.	To what extent have priority riparian habitats been identified for restoration and conservation? What new policies and incentives have been enacted to increase conservation and restoration of riparian habitats on private lands? Have riparian habitat restoration goals been established on public lands? When riparian goals are established, what area of riparian habitat has been restored or protected?	Map priority areas for restoration and conservation of riparian habitats statewide. Monitor the priority riparian areas for the status and trends of riparian vegetation and associated wildlife species.	Natural Community	See Appendix G
h. Federal, state, and local agencies and nongovernmental organizations, working with private landowners, should expand efforts to implement agricultural and rangeland management practices that are compatible with wildlife and habitat conservation.	What additional private acreage are managed for improving wildlife habitat and ecosystems?	Establish goals for acres of improved wildlife habitat on agricutlural and rangelands. Monitor the numbers of acres that have implemented practices that improve conditions for wildlife.	Natural Community, Ecosystem Function	See Appendix G
i. In their conservation planning and ecosystem restoration work, state and federal wildlife agencies and land managers should consider the most current projections of the effects of global warming.	To what extent have state and federal land management agencies considered future consequences of global warming in their land management planning efforts? To what extent have counties considerd the consequences of global warminig in county planning?	Prepare a guide and protocol for incorporating climate change considerations into wildlife and land management planning. Monitor wildlife and land management plans for elements regarding climate change.	Regional, Ecosystem Function	CEC
j. The state and federal governments should give greater priority to wildlife and natural resources conservation education.	What percentage of California youth and adults been exposed to wildlife and conservation education?	Every five years conduct a survey of grade school children and adults on basic wildlife and natural resources conservation issues.	Management	DFG, CDE, CIWMB

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
k. The state should strengthen its capacity to implement conservation actions and to assist local agencies and landowners with planning and implementation of wildlife and habitat restoration and conservation efforts.	Has the state expanded its capacity to assist local agencies with conservation planning and implementing wildlife and habitat restoration and conservation efforts?	Assess current staff and resources currently committed to assist local agencies and landowners to develop and implement restoration and conservation plans. Monitor staff and resources committed to this task each year.	Management	DFG
Recommended Region-Specific Conservation Actions				
Mojave Desert Region				
a. Improve stewardship on federally managed lands to protect wildlife diversity.	Identify resources required to implement federal and state wildlife conservation mandates that apply to federally management lands. What additional resources have been allocated to improve conservation on federal lands?	Need to expand existing monitoring efforts to include long term monitoring of status and trends of sensitive habitats. Expanded monitoring should fill in gaps in existing efforts (i.e. monitoring for recovery of the desert tortoise and other species).	Regional, Natural Community, Species	BLM, DMG
b. Stabilize groundwater levels and recharge depleted sub-basins of the Mojave River Basin, restoring groundwater to levels that support riparian habitat.	What is the trend in groundwater levels in the Mojave River Basin? Riparian habitat has recovered on how many acres along rivers, creeks and wetlands in the basin?	Groundwater monitoring and periodic assessments of riparian habitats in the Mojave River basin by the USGS, DFG, MWA is adequate to assess effectiveness of this action.	Natural Community, Ecosystem Function	MWA, USGS, BLM

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
c. Stabilize groundwater levels and secure wet habitats in the Amargosa River Basin. This action will help protect the endangered Amargosa vole and the Amargosa pupfish, among other species.	What is the trend in grondwater levels in the Amargosa River Basin? Riparian habitat has recovered on how many acres along rivers, creeks and wetlands in the basin?	Groundwater monitoring and periodic assessments of riparian habitats in the Amargosa River basin by is adequate to assess effectiveness of this action.	Natural Community, Ecosystem Function	BLM, DMG
d. Provide maximum federal and state protection for remaining riparian, spring, seep, and wetland habitats, and restore degraded riparian, spring, seep, and wetland areas.	What policies have been adopted or strengthened, or been more fully enforced to protect riparian, spring, seep, and wetland habitats? How many acres of these habitats have been restored?	Need to expand existing monitoring efforts to include long term monitoring of sensitive habitats and trends and natural communities. Expanded monitoring should fill in gaps in existing efforts, such as monitoring as part of the desert tortoise recovery efforts.	Natural Community, Ecosystem Function	BLM, FWS, DFG
e. The Bureau of Land Management should improve, and, upon approval, implement the West Mojave Plan with conservation measures to address all special status species and to maintain wildlife diversity.	What is the status of implementation of the West Mojave Plan? What is the status of covered species under the plan? To what extent has the monitoring plan been implemented? Are the plans goals being met for conserving special status species?	Monitoring and adaptive management is covered by the West Mojave Plan.	Regional, Natural Community, Species	BLM, DWS, DFG
f. Reduce off-road vehicle damage to wildlife habitats.	Have additional OHV parks opened? Have buffer areas around sensitve habitats been expanded? Has compliance with area restictions improved?	Need quatitative assessment of area damaged by OHVs and a monitoring program (such as through remote sensing) to assess changes in number acres of habitat restored or damaged.	Regional, Natural Community	BLM, DPR

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
g. Federal, state, and local agencies should provide greater resources and coordinate efforts to control existing occurrences of invasive species and to prevent new introductions.	In the region, have priority invasive species been reduced?	Need long term monitoring of priority invasive species.	Species	BLM, DMG
h. Fully implement the recovery plans for the Mojave tui chub, Amargosa vole, and Inyo California towhee.	Have the Mojave tui chub, Amargosa vole, and Inyo California towhee recovery plans been implemented? Have the goals of the plans been met?	Need long term monitoring of the amargosa vole.	Species	FWS, BLM
i. Fish and Game, BLM, and the three military bases that support the Mohave ground squirrel should develop a collaborative conservation and recovery strategy for the Mohave ground squirrel so that federal listing is not necessary.	Has a conservation and recovery strategy been completed for the Mohave ground squirrel? Have the goals of the plan been met?	Need long term monitoring of the Mohave ground squirrel.	Species	DFG, BLM, DOD
Colorado Desert Region				
a. Federal, state, and local agencies, along with nongovernmental conservation organizations, should work together to reach agreement upon and fund a restoration plan for the Salton Sea.	Has a restoration plan for the Salton Sea been agreed to by state and federal agencies? Does the plan address the needs of bird species for which the Sea is an imporant resource? Have state and federal funds been allocated for implementing the restoration plan? To what extent have the plans restoration goals been met?	Need comprehensive monitoring and adaptive management element incorporated into the Salton Sea Restoration Plan that meets the standards of NCCP.	Natural Community, Ecosystem Function, Species	DOI, FWS, DFG, SWRCB
b. Federal and state wildlife agencies should work to ensure that environmental impacts resulting from water transfers (both those permitted under the Quantification Settlement Agreement [QSA] and any future transfers) are mitigated.	To what extent has the Salton Sea and Imperial Valley Habitat Conservation Plan and the provisions of the related Biological Opinion been implemented? Have the goals of the HCP been achieved?	Covered by the Salton Sea and Imperial Valley Habitat Conservation Plan.	Natural Community, Ecosystem Function, Species	DOI, FWS, DFG, SWRCB

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
c. Federal and state wildlife agencies, water management agencies, and nongovernmental conservation organizations should develop and invest in restoration and protection efforts for the Salton Sea, the Colorado River delta, and other regional wildlife habitats.	What restoration has been achieved at the Salton Sea, Colorado River delta, and other wetland habitats in the region?	Need a monitoring and adaptive management element for restoration plans established for the Colorado River delta.	Regional, Natural Community, Species	DOI, FWS, DFG, SWRCB
d. Wildlife agency staff developing the Imperial Valley Habitat Conservation Plan, working with Imperial County planners and nongovernmental conservation organizations, should identify and protect critical avian habitats in southern Imperial County.	Have priority bird habitats been identified in the Imperial Valley? To what extent have these habitats been protected?	Need long term monitoring program for critical avian habitats in southern Imperial County.	Natural Community	DFG, FWS, Imperial County
e. The Bureau of Land Management, working with state and federal wildlife agencies and nongovernmental conservation organizations, should protect and restore biologically significant habitats in the Algodones Dunes.	Are habitat values improving in the Algodone Dunes? Are key species populations increasing or maintaining their numbers?	Need long term monitoring of the dune natural community.	Natural Community	BLM, FWS, DFG

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
f. State and federal agencies and nongovernmental partners should collaborate to develop a comprehensive Southern California Outdoor Recreation Program (for the South Coast and Colorado Desert regions) to provide recreational opportunities and access that do not conflict with wildlife habitat needs. Areas for intensive recreational access and off-road vehicle use should be developed on the least-sensitive public lands in order to direct pressures away from sensitive habitats.	Has a comprehensive Southern California Outdoor Recreation Program been developed? To what extent have the wildlife conservation goals of the plan been achieved?	Need quantitative assessment of area damaged by OHVs and a monitoring program (such as through remote sensing) to assess changes in number acres of habitat restored or damaged.	Regional	DPR, BLM, DFG, FWS
g. Federal, state, and local agencies and nongovernmental conservation organizations should work to protect and restore biologically significant habitats in the Coachella Valley.	Has the Coachella Valley Multispecies Conservation Plan been finalized? To what extent have the goals of the plan been achieved?	Covered by the CVMCP.	Regional, Natural Community, Species	BLM, FWS, DFG
h. Nongovernmental conservation organizations should continue to work to protect important wildlife habitat areas.	What additional lands in the important wildlife areas have protected status?	Establishment of new protected habitats should include monitoring and adaptive management as part of the management plans for those lands.	Natural Community	DFG, FWS
i. Permitting agencies, county and local planners, and land management agencies should work to ensure that infrastructure development projects are designed and sited to avoid harmful effects on sensitive species and habitats.	Have sensitive habitats of the region been identified and prioritized? Have policies been adopted that ensure infrastructure projects approved by land management agencies and local agencies do not harm theses habitats? What is the the status of the identified sensitive habitats?	Need long term regional monitoring.	Regional, Natural Community	DFG, FWS, Counties, Cities

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
j. Federal, state, and local agencies should work with nongovernmental organizations to provide greater resources to control and limit introductions of invasive species in the region.	In the region, have priority invasive species been reduced? (See statewide action f.)	Need long term monitoring of priority invasive species. (See Statewide Action f.)	Species	See: Statewide Action f.
South Coast Region				
a. Wildlife agencies and local governments should work to improve the development and implementation of regional Natural Community Conservation Plans (NCCPs), which is the primary process to conserve habitat and species in the region's rapidly urbanizing areas.	To what extent have the goals of the NCCPs of the region been achieved?	Covered by NCCPs.	Regional, Natural Community, Species	DFG, FWS, Counties, Cities
b. Wildlife agencies should establish regional goals for species and habitat protection and work with city, county, and state agency land-use planning processes to accomplish those goals.	Have wildlife agencies establshed regional goals for species and habitat conservation? To what extent have the regional conservation goals been adopted by local planning efforts?To what extent have those regional goals been achieved?	Need long term regional monitoring.	Regional	DFG, FWS
c. Safeguard and build upon Camp Pendleton's contribution to the regional network of conservation lands.	What additional lands adjacent to Camp Pendleton have been protected?	Covered by existing efforts.	Natural Community	DFG, FWS, DOD
d. To address regional habitat fragmentation, federal, state, and local agencies, along with nongovernmental conservation organizations, should support the protection of the priority wildlands linkages identified by the South Coast Missing Linkages project.	What percentage of 15 areas identified as imporant wildlands linkages by the South Coast Missing Linkages project have been protected?	Need long term monitoring program for habitat values of wildlands linkage areas identified by the South Coast Missing Linkages project.	Regional, Habitat Linkages, Species (wide-ranging)	SCW, DFG, FWS

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
e. Federal, state, and local agencies, along with nongovernmental conservation organizations, should protect and restore the best remaining examples of coastal wetlands that provide important wildlife habitat.	What additional acreages of coastal wetlands have been restored or protected?	Covered by existing efforts.	Natural Community	CCC, DFG, FWS, NMFS, SCWRP
f. Public agencies and nongovernmental conservation organizations should invest in efforts to protect and restore the best remaining regional examples of ecologically intact river systems.	What additional areas of ecologically intact river systems have been protected or restored?	Need to expand long term monitoring of priority river systems.	Natural Community, Ecosystem Function	DFG, FWS, CCC, USFS
g. Federal, state, and local agencies should provide greater resources and coordinate efforts to control existing occurrences of invasive species and to prevent new introductions.	In the region, have priority invasive species been reduced?	Need to expand long term monitoring of priority invasive species.	Species	See: Statewide Action f.
h. Federal, state, and local public agencies should sufficiently protect sensitive species and important wildlife habitats on their lands and should be adequately funded and staffed to do so.	Identify resources required to implement federal and state wildlife conservation mandates that apply to federally management lands. What additional resources have been allocated to improve conservation on federal lands?	Need to expand long term monitoring on public lands.	Natural Community, Species	DFG, FWS, CCC, USFS, Counties
i. Federal and state agencies and nongovernmental partners should collaborate to institute appropriate fire management policies and practices to restore the ecological integrity of the region's ecosystems while minimizing loss of property and life.	To what extent have fire management policies been implemented to restore the ecological integrity of forests? How many additional forested acres have improved ecological conditions?	Covered by land and resource management plans of the state and federal agencies.	Natural Community	USFS, CDF, DFG, FWS, DPR

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
j. The state should coordinate the development of a model ordinance and building codes for new or expanding communities in fire-adapted landscapes to make those communities more fire compatible and reduce the state's liability for fire suppression.	Has a model ordiance been adopted by counties for building codes tho make new construction more tolerant in fire-adapted landscapes?	Covered by monitoring pursuant to forest management plans.	Management, Natural Community	CDF, DFG, USFS, FWS, Counties
k. State and federal wildlife agencies, the U.S. Forest Service, state and county parks, BLM, and nongovernmental partners should collaborate to develop a comprehensive Southern California Outdoor Recreation Program to provide recreational opportunities and access that do not conflict with wildlife habitat needs.	Has a comprehensive Southern California Outdoor Recreation Program been developed? To what extent have the wildlife conservation goals of the plan been achieved?	Need quatitative assessment of area damaged by OHVs and a monitoring program (such as through remote sensing) to assess changes in number acres of habitat restored or damaged.	Regional	DPR, BLM, DFG, FWS
Central Coast Region				
a. Wildlife agencies should establish regional goals for species and habitat protection and work with city, county, and state agency land-use planning processes to accomplish those goals.	Have wildlife agencies establshed regional goals for species and habitat conservation? To what extent have the regional conservation goals been adopted by local planning efforts?To what extent have those regional goals been achieved?	Monitoring and adaptive management should be developed in conjunction with the development of regional conservation goals.	Regional	DFG, FWS
b. Federal, state, and local agencies, along with nongovernmental organizations, should work with private landowners and land managers to implement agricultural- and rangeland management practices that are compatible with wildlife and habitat conservation.	What additional private acreage are managed for improving wildlife habitat and ecosystems?	Establish goals for acres of improved wildlife habitat on agricutlural and rangelands. Monitor the numbers of acres that have implemented practices that improve conditions for wildlife.	Regional, Natural Community	See Appendix G

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
c. Federal, state, and local agencies, along with nongovernmental organizations, should work with private landowners to both continue and develop programs that help keep grazing land uses profitable.	What is the status and trends of conversion of rangelands for development of other land uses less compatible with wildlife conservation?	Need monitoring of land conversion of rangelands in important wildlife areas including migratory corridors.	Management, Habitat Linkages	See Appendix G
d. Federal, state, and local agencies, along with nongovernmental conservation organizations, should work to protect large, relatively unfragmented habitat areas, wildlife corridors, and underprotected ecological community types.	What percent of large habitat areas, wildlife corridors, and underprotected ecological communities are protected from land conversion or development?	Need a long term monitoring program for large habitat, wildlife corridors, and priority ecological community types. This program should coordiate with and build upon existing monitoring in the region.	Regional, Habitat Linkages	DFG, WCB, FWS, CCC
e. Federal, state, and local public agencies should sufficiently protect sensitive species and important wildlife habitats on their lands.	To what extent have sensitive species and wildlife habitats been identified and prioritized on public lands? What percent of these priority areas are restored or adequately managed to conserve species at risk?	Expand wildlife and natural community monitoring on public lands, to levels adequate to assess the status and trends of identified sensitive species and priority wildlife habitats.	Natural Community, Species	DFG, FWS, USFS, BLM, CCC, DPR, DOD, Counties
f. Federal, state, and local agencies should work to restore fish passage in aquatic systems important for anadromous and wide-ranging fish populations.	How many fish barriers have been removed and how many miles of rivers and streams have restored fish passage for anadromous and wide-ranging fish populations?	Covered by periodic fish barrier monitoring conducted by DFG, the Coastal Conservancy, and NGOs.	Species	DFG, NMFS, CCC, Caltrans
g. State and local agencies should allocate sufficient water for ecosystem uses when planning for and meeting regional water supply needs. Providing adequate water for wildlife and instream uses is particularly important in systems that support sensitive species or important habitat areas.	Have instream flow needs for anadromous fish and other fauna for the rivers and streams of the region? In how many river systems have management changes been made so that flows more closely mimic natural flows? What new long-term contracts for instream flows have been secured?	Many existing efforts collect data on the status of aquatic ecosystems. However, monitoring of aquatic ecosystems needs to be expanded in the region.	Ecosystem Function, Species	SWRCB, DFG

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
h. State and federal agencies should work to protect and restore biologically significant regional river systems.	Have watershed restoration and conservation plans been developed for biologically important regional river systems in the region? To what extent have the goals of those plans been met?	Covered by Department of Water Resources river flow monitoring programs.	Natural Community, Ecosystem Function	RWQCBs, USEPA, Army Corps, DFG, CCC, NMFS
i. Federal, state, and local agencies should provide greater resources and coordinate efforts to control existing occurrences of invasive species and prevent new introductions.	In the region, have priority invasive species been reduced? (See Statewide Action f.)	Need long term monitoring of priority invasive species. (See Statewide Action f.)	Species	See Statewide Action f.
North Coast–Klamath Region				
a. For regional river systems where insufficient or altered flow regimes limit populations of salmon, steelhead, and other sensitive aquatic species, federal and state agencies and other stakeholders should work to increase instream flows and to replicate natural seasonal flow regimes.	Have actions increased instream flows and restored flow regimes to improve conditions for salmon, steelhead and other sensitive aquatic species?	Covered by Department of Water Resources river flow monitoring programs.	Ecosystem Function, Species	SWRCB, DWR, DFG, Watershed Councils, RCDs, NMFS
b. Federal, state, and local agencies and private landowners should work to restore fish passage in aquatic systems important for anadromous and wide-ranging fish populations.	How many fish barriers have been removed and how many miles of rivers and streams have restored fish passage for anadromous and wide-ranging fish populations?	Covered by periodic fish barrier monitoring conducted by DFG, the Coastal Conservancy, and NGOs.	Species	SWRCB, DFG, Caltrans, NMFS, CCC, FERC
c. Through the Federal Energy Regulatory Commission (FERC) relicensing process, the state should pursue changes in operations of hydropower projects to provide more water for aquatic species and ecosystems and require that flows be managed to approximate natural flow regime.	Have aquatic ecosystems been restored due to conservation measures adopted in new FERC license agreements?	Covered by FERC agreement.	Ecosystem Function, Species	FERC, DFG, NMFS, SWRCB

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
d. Fish and Game should continue fisheries restoration and watershed assessment efforts.	Have fish populations recovered and aquatic ecosystems been restored due to utilization of watershed assessment information and fisheries restoration projects?	Generally covered by existing fish monitoring efforts.	Regional , Ecosystem Function	DFG
e. Fish and Game should develop future state- or regionwide recovery plans to benefit multiple species.	How many species at risk and how many acres of wildlands have benefited from multi-species conservation plans?	Covered by multispecies recovery plans.	Species	DFG
f. Where historical or active gravel mining has had substantial effects on river systems that are important for sensitive aquatic species, federal, state, and local agencies should continue monitoring and restoration efforts to minimize the negative effects of mining. Active mining operations should employ the most ecologically sensitive practices possible.	Is monitoring adequate to assess the impacts of gravel mining on sensitive aquatic species?	Need long term monitoring of aquatic ecosystems.	Ecosystem Function, Species	DFG, NMFS
g. Public forest lands should be managed to maintain healthy ecosystems and wildlife diversity. State and federal forest and wildlife managers should work cooperatively to develop a vision for future forest conditions.	Have wildlife conservation and ecological restoration goals been established for public forest lands? To what extent have those goals been achieved?	Need to amend forest management plans to include adequate monitoring and adaptive management plans to assess general improvements in ecosystem health and wildlife diversity.	Natural Community	PSRS-USFS, DFG, FWS, USGS, DPR
h. On public lands, post-fire and post-harvest treatments and forest management should be designed to achieve the principles listed in Action g, above.	Are post-fire practices and post-harvest forest management practices on public lands consistent with wildlife conservation and ecological restoration goals?	Covered by existing forest management monitoring efforts.	Natural Community	USFS, FWS, DFG

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
i. Federal and state agencies should work to understand the natural fire regimes of different ecosystems and how the ecological role of wildfire can be replicated with prescribed fire and other forest management practices.	To what extent have forest management practices been implemented to restore natural fire regimes or otherwise restore wildlife diversity and healthy ecosystems?	Covered by existing forest management monitoring efforts.	Natural Community, Ecosystem Function	PSRS-USFS, DFG, FWS, USGS, DPR
j. State and federal forest and wildlife managers should work cooperatively with private landowners and timber companies to develop timber-harvest cumulative-impact standards for watersheds in the North Coast–Klamath Region to protect ecosystem health and wildlife habitat.	Have cummulative impact standards been established for watersheds? Have those standards been achieved?	Need regional long term forest monitoring to assess cummulative impacts. Additional monitoring should be build upon existing monitoring, and address gaps in current efforts.	Regional, Ecosystem Function	DFG, CDF, FWS, NMFS, See Appendix G
k. State and federal agencies should work with private forestry operators and landowners to implement forest management practices that are compatible with wildlife and habitat conservation.	On how many additional acres of private forest lands have management practices been implemented to improve conditions wildlife?	Covered by monitoring pursuant to forest management plans.	Natural Community, Species	DFG, CDF, FWS, NMFS, See Appendix G
l. The state should coordinate the development of a model ordinance and building codes for new or expanding communities in fire-adapted landscapes to make those communities more fire compatible and reduce the state's liability for fire suppression.	Has the state established a model ordinance and building codes for fire-adapted communities? How many counties have adopted such ordiances to make their communities fire-tolerant?	Covered by monitoring pursuant to forest management plans.	Natural Community	CDF, DFG, USFS, FWS, Counties
m. Federal, state, and local agencies and nongovernmental organizations should work with regional landowners to develop and implement agricultural and rangeland management practices that are compatible with wildlife and habitat conservation.	On how many additional acres of private agricultural and range lands have management practices been implemented to improve conditions wildlife?	Same as 10.	Regional, Natural Community	See Appendix G

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
n. Federal, state, and local agencies should provide greater resources and coordinate efforts to control existing occurrences of invasive species and to prevent new introductions.	In the region, have priority invasive species been reduced? (See Statewide Action f.)	Need long term monitoring of priority invasive species. (See Statewide Action f.)	Species	See Statewide Action f.
o. Federal, state, and local agencies, nongovernmental conservation organizations, and private landowners should protect and restore underprotected and sensitive habitat types like riparian forests and coastal dunes.	Have sensitive habitats been identified and prioritized for the region? How additional acres of sensitive habitats have been restored or protected?	Need to expand long term monitoring of senstive habitats.	Natural Community	DFG, FWS, RCDs, USGS, PSRS-USFS
Modoc Plateau Region				
a. Federal land management agencies should more effectvely manage forest, shrub, aspen, meadow, and riparian habitat to enhance ecosystems and conditions for wildlife.	How many acres of forest, shrub, aspen, meadow, and riparian habitats have been restored to improve conditions for wildlife?	Need to expand natural community and ecosystem monitoring on public lands to assess the affects of land and natural resources management actions.	Natural Community, Ecosystem Function	USFS, BLM, DFG, FWS
b. Federal land management agencies should implement modifications to grazing management on public lands that are conducive to recovery of key habitats for restoring and conserving wildlife.	How many acres of key wildlife habitat have been restored due to changes in grazing management practices on public lands?	Need to expand natural community and ecosystem monitoring on public lands to assess the affects of land and natural resources management actions.	Natural Community, Ecosystem Function	USFS, BLM, DFG, FWS
c. The Bureau of Land Management should update the Resource Management Plans (RMPs) to include provisions to restore and conserve wildlife diversity.	Have the Resource Management Plans been updated to include stronger wildlife restoration and conservation elements? To what extent has the implementation of those elements been implemented?	Need to expand natural community and ecosystem monitoring on public lands to assess the affects of land and natural resources management actions.	Natural Community, Ecosystem Function	BLM, FWS, DFG

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d. Feral horse numbers should be maintained at levels that meet the constraints imposed by law, and funds should be provided for BLM and the Forest Service to meet the standards in place for the protection of meadows and riparian areas.	Have feral horse numbers been reduced to levels that do not cause damage to sensitive meadows and riparian areas?	Need to monitor meadow and riparian habitats.	Natural Community, Ecosystem Function	BLM, USFS, FWS, DFG
e. The Cooperative Sagebrush Steppe Restoration Initiative and the National Resource Conservation Service (NRCS) should design juniper-removal projects to benefit wildlife diversity and ecosystem health.	Are juniper removal projects being implemented in a way that is conducive to the recovery of native wildlife species?	Long term monitoring of juniper removal projects is needed to assess whether the removal strategies are conducine to restoration of native wildlife and ecosystem health.	Natural Community, Ecosystem Function	NRCS, BLM, USFS
f. Public forest lands should be managed to maintain healthy ecosystems and wildlife diversity, including thinning to restore diverse habitats and reducing the risk of catastrophic wildfire. State and federal forest managers and wildlife agencies should work cooperatively to develop a vision for the future forest condition.	Have ideal forest conditions been identified to benefit wildlife and ecosystems? To what extent have practices been implemented to achieve the goals set for forest conditions?	Need to monitor for species and ecological indicators designed to assess progress toward achieving desired forest conditions.	Natural Community, Ecosystem Function, Species	PSRS-USFS, DFG, FWS
g. Regarding forest management conservation actions, see Conservation Actions d, e, f, and g in Chapter 11, Sierra Nevada and Cascades Region.	In the region, to what extent have forest conservation actions been implemented?	Need to monitor for species and ecological indicators designed to assess progress toward achieving desired forest conditions.	Natural Community, Ecosystem Function, Species	BLM, USFS, FWS, DFG
h. Land management and wildlife agencies and conservation NGOs should develop an aquatic multispecies conservation plan for the Pit River watershed.	Has an aquatic multispecies conservation plan been established for the Pitt River watershed? To what extent have the conservation goals of the plan been achieved?	Need to implement monitoring to support adaptive management element of the plan.	Natural Community, Ecosystem Function, Species	PRWA, DFG, FWS, RCD's

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
Sierra Nevada and Cascades Region				
a. The state should provide scientific and planning assistance and financial incentives to local governments to develop and implement regional multispecies conservation plans for all of the rapidly developing areas of the Sierra Nevada and Cascades.	How many regional multi-species conservation plans have been developed for the rapidly developing areas of the Sierra Nevada and Cascades? To what extent have the conservation goals of those plans been achieved?	Monitoring and adaptive management would be designed and implemented as part of new regional multispecies conservation plannning efforts.	Regional, Natural Community, Ecosystem Function, Species	DFG
b. The Sierra Nevada Conservancy should develop a program, closely coordinated with federal, state, and local wildlife conservation planning efforts, that prioritizes areas for acquisition and easements based on the needs of wildlife.	Have wildlands important for wildlife conservation been prioritized throughout the Sierra and Cascades? What percent of the identified priority lands have been protected through easements or acquisitions?	Need long term monitoring program of status and trends of wildlife habitats region-wide.	Management, Regional, Habitat Linkages	SNC
c. In areas where substantial development is projected, the state and federal land management and wildlife agencies should identify and protect from development those critical wildlife migration or dispersal corridors that cross ownership boundaries and county jurisdictions.	Have wildlife migration or dispersal corridors been identified throughout the region? To what extent have those corridors been protected from development?	Need long term monitoring of priority wildlife migration and dispersal corridors.	Regional, Habitat Linkages	USFS, BLM, DFG, FWS, SNC, NPS
d. Public forest lands should be managed to maintain healthy ecosystems and wildlife diversity, including thinning to restore diverse habitats and reducing the risk of catastrophic wildfire. State and federal forest managers and wildlife agencies should work cooperatively to develop a vision for the future forest condition.	Have forest plans for public lands adopted principles for maintaiing health ecosystems and wildlife diversity? What percent of public lands are managed according to such principles?	Need to monitor for species and ecological indicators designed to assess progress toward achieving desired forest conditions.	Natural Community, Ecosystem Function, Species	USFS, CDF, DFG, FWS, NPS, DPR

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
e. On public lands, post-fire and post-harvest treatments and forest management should be designed to achieve the principles listed in Action d.	What percent of post-fire and post harvest treatments on public lands are designed according to the principles for maintaining ecosystem health and wildlife diversity?	Need to monitor for species and ecological indicators designed to assess progress toward achieving desired forest conditions.	Natural Community, Ecosystem Function	USFS, NPS, CDF, BLM, DFG, FWS
f. State and federal forest managers and state and federal wildlife managers should cooperatively develop timber-harvest cumulative-impact standards for each watershed or group of adjacent watersheds of the Sierra, Cascades, and Modoc regions to protect aquatic ecosystems and conserve wildlife habitat.	Have cummulative impact standards been established for watersheds? Have those standards been achieved?	Monitoring and adaptive management plans should be designed and implemented with implementation of cummulative impact standards.	Natural Community, Ecosystem Function	USFS, NPS, CDF, BLM, DFG, FWS, SWRCB
g. The State Resources Agency should coordinate the development of a model ordinance and building codes for new or expanding communities in fire-adapted landscapes to make those communities more fire compatible and reduce the state's liability for fire suppression.	Has the state established a model ordinance and building codes for fire-adapted communities? How many counties have adopted such ordiances to make their communities fire-tolerant?	None Needed.	Management	CRA
h. Federal, state, and local agencies and fire-safe councils should work cooperatively to expand the use of prescribed fire and natural-burn programs.	Prescribed fire and natural burn programs have been successfully implemented on how many acres of forest lands in the last year?	None Needed.	Management	USFS, BLM, NPS, FSCs
i. State and federal wildlife agencies and federal land managers should jointly develop and implement grazing strategies for the Sierra Nevada and Cascades Region to reduce or eliminate livestock grazing on sensitive habitats to restore the condition of meadow, riparian, aspen, and aquatic habitats.	How many acres of key wildlife habitat have been restored due to changes in grazing management practices on public and private lands?	Need expanded monitoring of sensitive habitats such as meadows and riparian habitats.	Natural Community, Ecosytem Function	USFS, BLM, FWS, DFG

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
j. Federal, state, and local agencies should provide greater resources and coordinate efforts to control existing occurrences of invasive species and to prevent new introductions.	In the region, have priority invasive species been reduced? (See Statewide Action f.)	Need long term monitoring of priority invasive species. (See Statewide Action f.)	Species	See Statewide Action f.
k. In their conservation planning and ecosystem restoration work, state and federal wildlife agencies and land managers should consider the most current projections of the effects of global warming.	To what extent have global climate changes projections been incorporated into wildlife and land management plans?	None Needed.	Management	CEC, DFG, FWS, SWRCB
l. Fish and Game should be allocated the resources to monitor the distribution of sensitive fish and other aquatic species populations and to engage effectively in water-rights decision processes, water diversion issues, land-management planning, and conservation planning actions to restore and enhance aquatic systems.	What improvements in the status of sensitive fish and aquatic species may be attributed to changes in water rights, water diversions, and other water management issues?	Expand monitoring of sensitive fish and aquatic species.	Ecosystem Function, Species	DFG
m. Through the FERC relicensing process, the state should pursue changes in operations of hydropower projects that will provide more water for wildlife, mandate that water flows be managed as close to natural flow regimes as possible, and ensure that the new license agreements provide the est possible conditions for ecosystems and wildlife.	Have aquatic ecosystems been restored due to conservation measures adopted in new FERC license agreements?	Monitoring needs should be covered as part of FERC agreements.	Ecosystem Function, Species	DFG, SWRCB, CHRC

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
n. The state, Inyo County, and the city of Los Angeles should fully implement the Lower Owens River Project (LORP), restoring riparian and aquatic habitat along 62 miles of the lower Owens River.	To what extent have the goals of the Lower Owens River Project been achieved?	Covered by existing monitoring efforts.	Natural Community	LADWP, DFG
o. The city of Los Angeles should reach long-term agreement with Inyo County and the state to use shallow flooding to control dust on the Owens Lake lakebed.	Has agreement been reached and implemented to use shallow flooding to control dust on the Owens Lake lakebed?	None Needed.	Management	LADWP, DFG
p. Fish and Game should establish trout-free sub-basins and lakes across the high Sierra and Cascades to restore amphibians and other native species while concurrently improving trout fisheries in other lakes.	In how many basins have native amphibians and othe fauna been restored due to the establishment of trout-free sub-basins?	Monitoring of high mountain aquatic ecosystems should continue to inform adaptive management.	Ecosystem Function, Species	DFG
q. Fish and Game and the U.S. Fish and Wildlife Service should seek an agreement with the Los Angeles Department of Water and Power (LADWP) to establish Owens pupfish and Owens tui chub in springs and creeks of the Owens Valley on LADWP lands as part of a strategy to recover these two endangered fish and ensure their long-term survival.	Has an agreement been reach and implemented to establish Owens tui chub in springs and creeks of the Owens Valley on LADWP lands?	Need to monitor the status of Owens tui chub in springs and creeks where they are established.	Species	FWS, DFG, LADWP

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
Central Valley and Bay-Delta Region				
a. The California Resources Agency, Fish and Game, the U.S. Fish and Wildlife Service, public land managing agencies, and local governments need to develop multicounty regional habitat conservation and restoration plans.	Have regional habitat conservation and restoration plans been developed and implemented? Have the conservation goals of the regional conservation and restoration plans been achieved? Are adjoining regional plans compatible with each other? Are they integrated with other regional plans (housing, transportation, infrastructure, etc.)? Do plans collectively address cumulative impacts and needs of all habitats and species?	Monitoring and adaptive management would be designed and implemented as part of new regional multispecies conservation plannning efforts.	Regional, Natural Community, Ecosystem Function, Species	CRA, DFG, FWS, Counties
b. Fish and Game, the U.S. Fish and Wildlife Service, the USDA Natural Resources Conservation Service, and local resource conservation districts need to improve conservation and restoration on private lands by assisting private landowners.	What is the status of wildlife and habitats on private lands? How many acres of each habitat are under long-term conservation agreements? Are landowner assistance programs strategically targeting the most important wildlife needs?	Remote sensing of land cover changes; targeted monitoring of indicator species sensitive to private land uses, where agreeable to landowners; regular assessment of landowner incentive programs	Management, Regional, Natural Community	See Appendix G
c. Public land managers need to continue improving wildlife habitat for a variety of species on public lands.	What is the status of wildlife and habitats on public lands? What are the trends in funding for wildlife management on public lands? Are all wildlife species addressed in land and habitat management plans?	Remote sensing of land cover changes; targeted monitoring of indicator species sensitive to public land uses; regular assessment of public land management plans, including funding and achievement of goals	Management, Regional, Natural Community	CBDA, DFG

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
d. Public agencies and private organizations need to work with the San Francisco Bay Joint Venture to protect and restore tidal habitats and baylands in San Francisco Bay.	How many acres of tidal habitats and baylands have been restored? How many acres are under long-term conservation management (including fee-title, easements, and private land options)? What are the status and trends of water quality and invasive species in these habitats? What are the trends in funding for wildlife management on public lands? Are all wildlife species addressed in land and habitat management plans? Are goals of the San Francisco Bay Joint Venture's strategic plan and the San Francisco Estuary Project's Comprehensive Conservation and Management Plan being achieved? Is implementation of both plans integrated with each other?	Remote sensing of land cover changes; targeted monitoring of indicator species; assessment of land management status; trends in water quality and invasive species;regular assessment of conservation and public land management plans, including funding and achievement of goals	Natural Community	SFEI, SFBJV, DFG
e. Public agencies and private organizations need to collaboratively protect and restore habitat connectivity along major rivers in the Central Valley.	How many contiguous acres of riparian habitat along major rivers of the Central Valley have been restored and protected? Do water supply and flood management practices and structures allow for long-term persistence of riparian habitat?	Remote sensing of land cover changes; assessment of land management status; trends in invasive species;regular assessment of water supply and flood management practices and structures	Habitat Linkages	CVHJV, RHJV, CBDA, DFG, FWS
f. Public agencies and private organizations need to collaboratively protect and restore upland linkages among protected areas in the San Joaquin Valley.	What are the extent and condition of key upland habitat linkages in San Joaquin Valley? Do regional conservation plans identify key habitat linkages for a variety of wildlife species? How much of each key habitat linkage is under long-term conservation management? What are trends in habitat connectivity and fragmentation?	Remote sensing of land cover changes; assessment of land management status; assessment of regional plans, including goals, funding and implementation success	Habitat Linkages	CVHJV, RHJV, CBDA, DFG, FWS

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
g. Public agencies and private organizations need to collaboratively protect and restore lowland linkages in San Francisco Bay.	What are the extent and condition of key lowland habitat linkages in San Francisco Bay area? Do regional conservation plans identify key habitat linkages for a variety of wildlife species? How much of each key habitat linkage is under long-term conservation management? What are trends in habitat connectivity and fragmentation?	Remote sensing of land cover changes; assessment of land management status; assessment of regional plans, including goals, funding and implementation success	Habitat Linkages	SFEI, SFBJV, DFG
h. Public agencies and private organizations need to collaboratively protect upland linkages and reduce the risk of habitat isolation in the eastern and northern San Francisco Bay area.	What are the extent and condition of key upland habitat linkages in eastern and norther San Francisco Bay area? Do regional conservation plans identify key habitat linkages for a variety of wildlife species? How much of each key habitat linkage is under long-term conservation management? What are trends in habitat connectivity and fragmentation?	Remote sensing of land cover changes; assessment of land management status; assessment of regional plans, including goals, funding and implementation success	Habitat Linkages	SFEI, SFBJV, DFG
i. Water management agencies need to secure dependable and adequate amounts and quality of water for wildlife.	How many long term agreements exist that assure wildlife areas with adequate amounts of water, at the appropriate seasons, to meet the needs of all species that use these areas? How many water-banking projects are established to provide water for wildlife?	Water supply to wildlife areas, compared to the needs of species on those wildlife areas; assessment of water-bank success	Natural Community, Ecosystem Function	CVHJV, RHJV, CBDA, DFG, FWS

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
j. Water management agencies need to reestablish and maintain more natural river flows, flooding patterns, water temperatures, and salinity conditions to support wildlife species and habitats.	Do water supply and flood management practices and structures allow for long-term persistence of riparian habitat? Are river flows, particularly in the major rivers of the Central Valley, be of sufficient frequency, timing, duration, and magnitude to restore and maintain functional natural floodplain, riparian, and riverine habitats? What are seasonal and year-to-year patterns of variability in estuary salinity?	Remote sensing of land cover changes; regular assessment of water flows and flood management practices and structures; regular assessment of aquatic species populations and habitat conditions; water quality monitoring	Ecosystem Function	SWRCB, DWR
k. Water management agencies need to restore gravel supply in sediment-starved rivers downstream of reservoirs to maintain functional riverine habitats.	Is there adequate gravel supply in rivers for spawning salmon and other anadromous fish? What is the condition and trends of natural or artificial sediment sources? Can river banks and floodplains provide adequate sediment supply to rivers? What are the status and trends in sediment deposition and erosion processes along rivers? Does each watershed have a comprehensive sediment management plan and an ecologically based stream-flow regulation plan that is adequately funded?	Disturbances to natural sediment sources; changes in flood and water management that reduce gravel supply; Changes in sediment deposition and erosion	Ecosystem Function	SWRCB, DWR

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
I. Public agencies and private organizations should protect, restore, and improve water-dependent habitats (including wetland, riparian, and estuarine) throughout the region. Design of these actions should factor in the likely effects of accelerated climate change.	Have priority areas of water-dependent habitats been identified throughout the region? To what extent have these priority areas been protected or restored? Are runoff, sediment and contaminant loading from upland areas increasing due to changes in land use? Are habitats decreasing in extent and distribution due to climate change? How many acres of wetland, riverine, and aquatic habitats have been restored? Is up-to-date information about flood-prone areas (not just FEMA flood zones) incorporated into land use plans? Is urban and residential expansion precluding opportunities to conserve wetlands that may shift due to climate change? Are floodplains and bypasses managed to maximize ecosystem protection, habitat restoration, and wildlife use while still providing for public safety and flood-damage reduction? Are functional hydrological connections between upper watersheds and downstream habitats being maintained, restored, and improved?	Nonpoint source pollution from upland areas. Veg and land cover mapping. Assessment of land use plans. Assessment of floodplain and bypass management. Assess functioning of hydrological connections.	Natural Community, Ecosystem Function	DWR, SWRCB, CBDA

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
m. Water management agencies, state and federal wildlife agencies, and other public agencies and private organizations need to collaboratively improve fish passage by removing or modifying barriers to upstream habitat.	How many fish passage barriers have been removed? How many additional miles of aquatic habitats are now accessible for anadromous or wide-ranging fish species due to removal of fish barriers?	Locations and numbers of barriers and their relative abilities to block fish passage	Ecosystem Function, Species	CBDA, DFG, Caltrans
n. To support healthy aquatic ecosystems, public agencies and private organizations, in collaboration with the California Bay-Delta Authority, need to improve and maintain water quality in the major river systems of this region.	What are the status and trends of water quality in the major rivers of the region? Are the goals of the Bay Delta Authority's Drinking Water Quality Program and the Ecosystem Restoration Program being met?	Water quality	Ecosystem Function	SWRCB, RWQCB, CBDA
o. Regional water quality boards, in collaboration with other public agencies and private organizations, need to improve and maintain water quality in streams and tidal waters of San Francisco Bay.	What are the status and trends of water quality in the streams and tidal waters of San Francisco Bay? Are the goals of the San Francisco Estuary Project's Comprehensive Conservation and Management Plan being achieved?	Water quality	Ecosystem Function	RWQCBs, USEPA, Army Corps, DFG, CCC, NMFS
p. Fish and Game should expand funding and coordinate efforts to prevent the establishment of invasive species and to reduce the damage of established invasive species.	In the region, have priority invasive species been reduced? (See Statewide Action f.)	Need long term monitoring of priority invasive species. (See Statewide Action f.)	Species	See Statewide Action f.

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
Marine Region				
a. The state should fully implement the Marine Life Management Act to ensure that marine fisheries and the marine ecosystem are managed sustainably.	For how many major fisheries are management plans completed and implemented? To what extent are the management goals of those plans being achieved?	Monitoring and adaptive management should be an element of each fishery management plan. Species and ecosystems affected by the management plans should be monitored.	Natural Community, Ecosystem Function, Species	DFG
b. The state should move forward in implementing the Marine Life Protection Act by establishing a network of marine protected areas.	For what percent of the coast have marine protected areas been designated pursuant to the MLPA? To what extent have the goals of the marine protected areas been achieved?	Monitoring and adaptive management should be an element of MPA management plans.	Natural Community, Ecosystem Function, Species	DFG
c. The state should secure Tidelands Revenues for implementation of the California Ocean Protection Act.	Have Tideland Revenues been secured for the implementation of the California Ocean Protection Act? To what extent have these critical marine habitats been protected in marine protected areas or by other means?	None Needed.	Management	DFG, SLC
d. The state should increase efforts to restore coastal watersheds.	For how many coastal watersheds have restoration plans been developed ? To what extent have the conservation goals of those plans been achieved?	Additional monitoring of coastal watersheds.	Regional, Natural Community, Ecosystem Function	DFG, CCC
e. The state should adopt a "no net loss" policy for critical marine habitat.	Have critical marine habitats been identified and mapped along the coast? To what extent have those key habitats been protected?	Need long term monitoring of critical marine habitats.	Natural Community	DFG
f. The federal and state resource agencies should expand efforts to eradicate introduced predators from all seabird colonies.	Introduced predators have been eradicated from how many additional seabird colonies?	Covered by existing monitoring.	Species	FWS, NPS, DFG

Recommended Conservation Actions	Effectiveness Monitoring Questions	Needed Monitoring	Monitoring Level	Monitoring Collaborators
g. The state should systematically review and monitor the distribution and abundance of nonharvested marine fish and invertebrates.	What additional efforts have been established to monitor and assess the status and trends of nonharvested marine fish and invertebrates?	Need long term monitoring of nonharvested marine fish and invertebrates.	Species	DFG
h. Federal and state resource agencies and institutions should foster and facilitate interstate collaborative research on marine species whose ranges cross jurisdictional boundaries.	To what extent have interstate and transnational research efforts been established to assess marine species whose ranges cross jurisdictional boundaries?	Need long term monitoring of marine species and ecosystem indicators that are relevant across boundary water with Mexico and Oregon.	Regional, Natural Community, Ecosystem Function, Species	DFG, NMFS, NOAA Fisheries, CCC

Acronyms

BLM, Bureau of Land Management, http://www.blm.gov/ca/

Caltrans, California Department of Transportation, http://www.dot.ca.gov/

CBDA, California Bay-Delta Authority, http://calwater.ca.gov/

CCC, California Coastal Conservancy, http://www.coastalconservancy.ca.gov/

CDE, California Department of Education, http://www.cde.ca.gov/pd/ca/sc/oeeintrod.asp

CDF, California Department of Fire Protection and Prevention, http://www.fire.ca.gov/php/rsrc-mgt.php

CDHCD, California Department of Housing and Community Development

CEC, California Energy Commission, http://www.energy.ca.gov/

CHRC, California Hydropower Reform Coalition, http://www.calhrc.org/

Cities, http://www.igs.berkeley.edu/library/localweb.html

CIWMB, California Waste Management Board, http://www.ciwmb.ca.gov/

Counties, http://www.csac.counties.org/default.asp?id=7

CRA, California Resources Agency, http://resources.ca.gov/

CVHJV, Central Valley Habitat Joint Venture, http://www.centralvalleyjointventure.org/pages/1/index.htm

DFG, California Department of Fish and Game, www.dfg.ca.gov

DMG, Desert Managers Group, http://www.dmg.gov/

DOD, U.S. Department of Defense

DOI, U.S. Department of Interior, http://www.interior.gov/subject.html

DPR, California Department of Parks and Recreation, http://www.parks.ca.gov/

DWR, Department of Water Resources, http://www.water.ca.gov/

FERC, Federal Energy Regulatory Commission, http://www.ferc.gov/industries/hydropower.asp

FSC, Fire Safe Councils, http://www.firesafecouncil.org/about/index.cfm

FWS, U.S. Fish and Wildlife Service, http://www.fws.gov/offices/directory/ListOffices.cfm?statecode=6

Imperial County, http://www.co.imperial.ca.us/

LADWP, Los Angeles Department of Water and Power, http://www.ladwp.com/ladwp/cms/ladwp004409.jsp

MWA, Mojave Water Agency, http://www.mojavewater.org/

NMFS, National Marine Fisheries Service, http://swr.nmfs.noaa.gov/

NPS, National Park Service, http://www.nature.nps.gov/nnl/Registry/USA_Map/States/California/california.cfm

PRWA, Pit River Watershed Alliance, http://www.pitriveralliance.net/

PSRS-USFS, Pacific Southwest Research Station, http://www.fs.fed.us/psw/

RCDs, Resource Conservation Districts, http://www.carcd.org/yourdistrict/rcdabout.htm

NOAA Fisheries Service, http://www.nmfs.noaa.gov/

NRCS, Natural Resources Conservation Service, http://www.ca.nrcs.usda.gov/

RHJV, Riparian Habitat Joint Venture, http://www.prbo.org/calpif/htmldocs/rhjv/

RWQCBs, Regional Water Quality Control Boards, http://www.swrcb.ca.gov/regions.html

SCW, South Coast Wildlands, http://www.scwildlands.org/

SCWRP, Southern California Wetlands Recovery Project, http://www.scwrp.org/index.htm

SFBJV, San Francisco Bay Joint Venture, http://www.sfbayjv.org/

SFEI, San Francisco Estuary Institute, http://www.sfei.org/progprojhome.html

SLC, State Lands Commission, http://www.slc.ca.gov/

SNC, Sierra Nevada Conservancy, http://sierranevadaconservancy.ca.gov/

SWRCB, State Water Resources Control Board, http://www.swrcb.ca.gov/

USACE, US Army Corps of Engineers, http://www.usace.army.mil/where/where.html#States

USEPA, U.S. Environmental Protection Agency, http://www.epa.gov/region9/

USFS, U.S. Forest Service, http://www.fs.fed.us/r5/

USGS (Mojave), US Geological Survey, http://mojave.usgs.gov/rvde/

Watershed Councils, http://cwp.resources.ca.gov/cwc_about.html

WCB, Wildlife Conservation Board, http://www.wcb.ca.gov/